Suicide is preventable: How can we help our teens?

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Every October, after school starts—and each May, as it ends—there is a spike in the number of teenagers who go to the Yale New Haven Children's Hospital (YNHCH) emergency department because they are thinking about attempting suicide. They may or may not have struggled

with a mental health issue before. But they often have a story: Bullies are harassing them, their parents are divorcing, the academic pressure is crushing them. For some, it's gender concerns—they have come out as trans or non-binary, and their peers are shutting them out.

"It's everything—all the pitfalls of being a teenager," says Kirsten A. Bechtel, MD, a Yale Medicine specialist in the YNHCH, where she says 1,500 to 1,700 of the 40,000 patients a year come in for care for anxiety, depression, and other mental health and behavioral problems, and about 500 of those have suicidal thinking or behavior. In some cases, there may be no clear reason at all, she says.

Suicide is preventable, but rates of suicide are increasing worldwide, and it is now the second leading cause of death in adolescents and young adults (unintentional motor vehicle accidents are first).

Going to the emergency room may be the smartest thing these teenagers can do, Dr. Bechtel says. YNHCH is a Level 1 pediatric trauma center and provides subspecialty care for vulnerable children. Even a single attempt, not to mention an actual suicide, is a tragedy, she says, and a sign that there is a need for more prevention.

Why are teen suicides increasing?

Experts aren't sure why there is an escalation in teen suicides, and an increase in mental illnesses, like depression and bipolar disorder, that are linked to suicide. One potential trigger may be what's called "contagion"—when one suicide seems to prompt a chain reaction of suicides. Controversy has swirled around the Netflix series "13 Reasons Why," which highlights the story of a girl who killed herself and left behind tapes to explain why. While some argue that the show has stimulated a positive conversation around the topic, a study in the *Journal of the American Academy of Child and Adolescent Psychiatry*

showed a 28.9 percent increase in suicide rates in young people ages 10 to 17 in the month after the show's release in April 2017. (In July 2019, producers followed advice from medical experts and cut a scene that portrayed the suicide.)

Social media also comes under discussion. "There is tantalizing data as far as the effects of social media, but I don't think we have a good grip on that association," says Yann Poncin, MD, a Yale Child Study Center psychiatrist, and medical director of the Children's Day Hospital and In-Home Intensive Child & Adolescent Psychiatric Service. Dr. Poncin has noticed that many teenagers with depression—especially girls—turn to the online world. "I think the use of social media in a teenager with pre-existing concerns does fuel the fire a bit," he says.

Although Dr. Bechtel has seen cases where social media has been used to alert friends that a teenager was in trouble, Facebook and Instagram can also drive a vulnerable teen to despair, she says. "The negative feedback teenagers get about what they said, what they wore, and who they are is so intense," she says.

However, some of the biggest issues teens face are not new at all, Dr. Poncin says. A common one is loss—a romantic breakup, the end of a friendship, a death or divorce in the family—combined with underlying psychiatric disorders such as anxiety, depression, and bipolar disorder, which are also on the rise. Another is bullying: In a 2008 study, Yale researchers reviewed studies from 13 countries and found a connection between bullying and suicide.

How do you know a teenager is in trouble?

One thing experts agree on is that teenagers look at the world differently than adults do. "Psychologically, teenagers tend to have more absolutist views. They see things in starker, more rigid colors, and they see fewer

gray areas," says Eli Lebowitz, Ph.D., the director of the Program for Anxiety Disorders at the Yale Child Study Center. "This view can make a problem seem more daunting and a solution seem less likely, where a more mature person might be more accustomed to realizing that life has a combination of good and bad."

Dr. Lebowitz tells parents who are worried to look at the teen's ability to function. "'Normal' is ultimately the ability to function in way that is in line with expectations for someone of a similar age," he says. For a teenager, that means attendance, performance, and the ability to get along with others at school, he explains. It is having a satisfying social life in and out of school, and the ability to participate in a reasonably functioning family life (whether or not it is devoid of conflict). It includes the "ability to eat, sleep, and get through a day feeling OK," he says.

Jennifer Dwyer, MD, Ph.D., a psychiatrist at the Yale Child Study Center, says parents should pay attention if their teenager is chronically angry, cranky, or irritable, since teen depression may manifest through these behaviors rather than strictly through sadness or crying. But sadness can be a symptom too, she adds. Parents also should take note if teenagers are isolating themselves from friends, in constant conflict with the family or peers, having mood swings, giving away their belongings, or increasing their use of alcohol and drugs, she says.

Should you ask if they are thinking about suicide?

Suicidal ideation—essentially thinking about suicide—is not uncommon; in fact, most teenagers probably have thoughts, even if they don't try it, Dr. Lebowitz says. But he says that many parents are hesitant to ask their teenager the direct question: Are you thinking about hurting yourself? "Not asking is usually a mistake. You are not likely to cause suicidal behavior if you ask about it," he says. If the answer is yes, Dr. Lebowitz

says the parent can follow up with additional questions:

- How often do you think about it?
- When do you think about it (all the time or only when you are really angry)?
- Do you want to do it?
- Do you have a specific plan?

If the teenager answers yes, the parent should seek help, Dr. Lebowitz says. "If the answer to the last two questions is yes, that would show the highest level of risk," he adds. "Even if the answers to those are no, if a teenager thinks about it often, and not only when they are very angry or frustrated, then seeking help is recommended because it would indicate a high level of distress."

These questions can also help diffuse the situation, Dr. Lebowitz says. "If you are alone thinking about suicide and you're not able to talk about it, and nobody is asking you, that puts you at higher risk. If someone asks, even if you don't like that person, it can reduce that sense of isolation. It's just a fact in the life of a teenager that when somebody does care, it will reduce the risk," he says.

Getting treatment to prevent suicide

Treatment for suicidal ideation starts with understanding the underlying concerns. Individual therapy, medication management, and the combination of the two could be appropriate, depending on the circumstances. Medicines that treat depression can often include a selective serotonin reuptake inhibitor (SSRI) such as Prozac or Zoloft. The medication can be combined with cognitive behavioral therapy (CBT), which involves regular meetings with a therapist to explore thoughts, feelings, and behaviors to better manage problems. "You can teach someone to recognize their own thinking patterns," Dr. Lebowitz

says. "It's not instantaneous. But you can train the brain to recognize that pattern and say, "Oh, I'm falling into my thinking trap.""

"A lot of times the relationship with the therapist you are seeing is a good predictor of how therapy might work," says Dr. Dwyer. "It should be someone the child and the parents feel comfortable bringing their concerns to, and who the child can stick with even when discussing difficult topics."

Still, about 40 percent of teenagers fail to respond to medication, and half of that 40 percent don't respond even when they switch to another medication and add psychotherapy, says Dr. Dwyer. "There aren't a lot of great guidelines or algorithms after you've not had success with two medication trials and a trial of evidence-based psychotherapy," she says.

Given the seriousness of adolescent treatment-resistant depression and suicide, novel treatments are currently being investigated. Ketamine is an anesthetic that has made headlines for its surprising antidepressant effects in adults. Esketamine, a related compound that is delivered as a nasal spray, was approved by the Food and Drug Administration (FDA) this year for treatment-resistant depression in adults. This medication works rapidly, within 24 hours, to reduce depressive symptoms compared to SSRIs, which take weeks to work. Ketamine is also associated with a reduction in suicidality in adults, even after controlling for any improvements in depressive symptoms.

Ketamine and esketamine are only now beginning to undergo rigorous testing for adolescents with treatment-resistant depression and suicidality. A small randomized clinical trial at Yale showed a positive effect of a single ketamine infusion in adolescents with treatment-resistant depression compared to a placebo, but this study only looked at short-term (two-week) outcomes.

Unfortunately, single doses of ketamine typically do not lead to sustained antidepressant responses, and Dr. Dwyer's group is now conducting a trial looking at a limited number of repeated ketamine doses (which are associated with prolonged antidepressant effects in adults) in this population. But caution is warranted, Dr. Dwyer says, noting that some animal studies suggest that younger ages may be more susceptible to damage to the brain from a high dose of ketamine. It's important to realize that ketamine is still considered an experimental treatment at this time for pediatric patients, she emphasizes. "I'm hopeful, but I'm also cautious about it, because I think the issues of effective and safe dosing paradigms in the population still need to be worked out," says Dr. Dwyer.

What we are learning about the teenage brain

Meanwhile, neuroscientists are looking for clues in the brain which, in teens, is still developing. "Adolescence is a time when suicidal thoughts and behaviors can start to emerge," says psychiatrist and neuroscientist Hilary Blumberg, MD, director of the Mood Disorders Research Program at Yale School of Medicine. She is using magnetic resonance imaging (MRI) to take pictures of the brains of adolescents and young adults with bipolar disorder who are at especially high risk—an estimated 50 percent of whom will attempt suicide at some point.

"We're identifying the brain circuitry that underlies suicide thoughts and behaviors, how its trajectory of development differs in adolescents at risk for suicide, and how this can be helped," says Dr. Blumberg, who has seen subtle variations in the prefrontal cortex of young people who have attempted suicide. (The prefrontal cortex has such executive functions as regulating emotions and impulses, and decision-making and planning. It can be compromised by various kinds of child abuse, substance abuse, and other stressors.) She and her research team have also observed subtle differences in the prefrontal structure in teens who

go on to make a suicide attempt. "This provides us with new leads about how to generate targeted interventions to prevent suicide."

Dr. Blumberg is also studying Social Rhythm Therapy (SRT), an approach that she says is showing early promise for normalizing brain circuitry and preventing suicide. SRT is designed to improve mood by regulating emotions and regularizing daily "rhythms"—an example of the latter is sleep patterns. "In order to help people have more regular sleep, you have to look at potential issues that may be causing the disruption. Their issues could be tied to social interactions and activity throughout the day, and a therapist can help them problem-solve around that," Dr. Blumberg says. "We are encouraged by preliminary results where, after 12 weeks of regularizing daily rhythms, we see reductions in symptoms and suicide risk, and improvements in related brain circuitry."

"The field has made important progress, but more research is needed," Dr. Blumberg says. She is the U.S. lead of an international research consortium studying the brain scans of thousands of young people around the world who have suicidal thoughts and behaviors. She notes that the research is promising and may also turn out to be helpful to people who have bipolar disorder, as well as depression and other mental illnesses. "The future is very hopeful. We already have some strategies to prevent suicide, and it is especially hopeful that researchers from different disciplines are coming together in global efforts to discover new ways to reduce suicide."

What if you are worried about suicide now?

Of course, many families need help immediately. If this is the case, Maryellen Flaherty-Hewitt, MD, a Yale Medicine pediatrician, recommends talking to the family pediatrician. "We routinely ask questions about access to guns, medications in the home, video games teenagers are using, and if they are exposed to violence," says Dr.

Flaherty-Hewitt. The pediatrician should be alert to teenagers who have had no history of mental illness, but who may be having difficulty coping with, say, feelings about sexuality, bullying at school or online, or the transition from one school to another, she says.

"When you have a child who has suicidal ideation, it's a crisis, and pediatricians want to be part of this conversation. We want to make sure we bring the right people into the mix right away," Dr. Flaherty-Hewitt says.

If the crisis warrants going to the emergency room, one of the first things that will happen is a counselor will sit with the teenager and listen to their concerns. In some cases, the patient will be admitted to the hospital or referred to YNHCH's Partial Hospitalization Program. But, Dr. Bechtel says, "I'm always amazed how some of these kids are alright. Maybe they needed some respite, or maybe the biggest problem is that their behavioral health needs aren't being met in the community," she says.

For most young patients, thoughts of suicide are manageable, specialists say. "It may be a lifelong vulnerability, but there are many people who used to have an anxiety disorder or depression," says Dr. Lebowitz. "We need to foster a belief in treatment and the understanding that having these problems can be part of life."

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